Emissions Inventory EXAMPLE: Natural Gas Boilers and Heating Equipment

General Process Form 2014

Permit number(s) _____

Place an X in any gray cell to mark data requested to be held confidential. See Instructions for requirements for information to be deemed confidential.

1- Process ID ***1***

☐ **2-** Process Type/Description: ***3 boilers & 1 water heater, each rated less than 10,000,000 Btu/hr***

3- Stack ID(s) *(only if required on Stack Form)* _____ _____ _____ _____ _____

4- Process TIER Code: ***020301*** FUEL COMBUSTION NATURAL GAS

5- SCC Code ***10200603*** *(8 digit number)* INDUSTRIAL NATURAL GAS COMBUSTION < 10 MMBTU/HR

6- Seasonal Throughput Percent: Dec-Feb ***25*** % Mar-May ***25*** % Jun-Aug ***25*** % Sep-Nov ***25*** %

7- Normal Operating Schedule: Hours/Day ***18*** Days/Week ***6*** Hours/Year ***5616*** Weeks/Year **52**

8- Typical Hours of Operation *(military time)* Start ***0600*** End ***2359***

☐ **9-** Emissions based on: *(name of material or other parameter e.g. "rock", "diesel", "vehicle miles traveled")* ***natural gas***

10- ☒ Used (input) or ☐ Produced (output) or ☐ Existing (e.g. VMT, acres)

☐ **11-** Annual Amount: *(a number)* ***25,000*** **12-** Fuel Sulfur Content (in percent) _____

13- Unit of Measure: *(for example: tons, gallons, million cu ft, acres, units produced, etc.)* ***therms***

14- Unit Conversion Factor: *(if needed to convert Unit of Measure to correlate with Emission Factor Units)* ***0.0000952***

NOTE: Place an X in any gray cell to mark data requested to be held confidential. See Instructions for requirements for information to be deemed confidential.

	Emission Factor (EF) Information					Control Device Information					
15	**16**		**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**
Pollutant	Emission Factor (EF) (number)		Emission Factor Unit (lb per)	Controlled EF? Yes or No	Calculation Method Code*	Capture% Efficiency	Primary Control Device ID	Secondary Control Device ID	Control Device(s) % Efficiency	Efficiency Reference Code**	Estimated Actual Emissions
CO	***84***		***lb/MMCF***	***No***	***5***						***200*** lb
NOx	***100***		***lb/MMCF***	***No***	***5***						***238*** lb
PM10	***7.6***		***lb/MMCF***	***No***	***5***						***18*** lb
SOx	***0.6***		***lb/MMCF***	***No***	***5***						***1*** lb
VOC	***5.5***		***lb/MMCF***	***No***	***5***						***13*** lb

NOTE: This is the most common natural gas equipment type. The TIER code on line 4 and emission factors in column 16 are suitable for any size natural gas heating equipment (but NOT engines). Emissions are calculated as follows:
Annual amount (line 11) × unit conversion factor (line 14) x EF (col. 16) = col. 25, Estimated Pollutant Emissions.
***Example for CO*: 25,000 therms × 0.0000952 MMCF/therm = 2.38 MMCF × 84 lb/MMCF = 200 lb. CO emissions**

***Calculation Method Codes**

1 = Continuous Emissions Monitoring Measurements
2 = Best Guess/ Engineering Judgment
3 = Material Balance
4 = Source Test Measurements (Stack Test)
5 = AP-42/ FIRE Method or Emission Factor
6 = State or Local Agency Emission Factor
7 = Manufacturer Specifications
8 = Site-Specific Emission Factor
9 = Vendor Emission Factor
10 = Trade Group Emission Factor

****Control Efficiency Reference Codes**

1 = Tested efficiency / EPA reference method
2 = Tested efficiency / other source test method
3 = Design value from manufacturer
4 = Best guess / engineering estimate
5 = Calculated based on material balance
6 = Estimated, based on a published value